

REMARKS

In response to the Office Action dated March 31, 2008, Applicants respectfully request reconsideration based on the above claim amendments and the following remarks. Applicants respectfully submit that the claims as presented are in condition for allowance.

Claims 9-12, 17-23 and 26-29 are pending in the present Application. Claims 9, 18 and 23 are amended to better set forth the invention, leaving Claims 9-12, 17-23 and 26-29 for consideration upon entry of the present amendments and following remarks.

Support for the claim amendments can at least be found in the specification, the figures, and the claims as originally filed. Particularly, support for amended Claim 9 is at least found in originally filed Figures 3A and 3B. The “opening in the upper transparent plate” is shown as a solid line rectangle in the upper transparent plate 357 in Figure 3A. Light 317 is shown penetrating through this “opening in the upper transparent plate” and being reflected off the light concentrating pad 353, while the optical waveguide 352 is exposed through the “opening in the upper transparent plate” in Figure 3B.

Support for amended Claim 18 is at least found in originally filed Figure 2 and Claim 23.

Support for amended Claim 23 is at least found in originally filed Figure 1 and in the specification at page 6, lines 14-16, and page 6, line 24 to page 7, line 2. For example, the light guide 3, is disclosed as a prism, and first and second light concentrating means 3a and 3b are disclosed as convex lenses.

No new matter has been introduced by these amendments. Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

****PTO-892 form and Brogårdh, U.S. Patent No. 4,475,240**

Applicants respectfully note that U.S. Patent No. 4,475,240 to Brogårdh et al., has not been indicated as formally considered on any PTO-892 form attached to any previous Office action. Brogårdh et al. has also not been submitted by Applicants in any PTO-1449 form.

Applicants respectfully request indication of formal consideration on a PTO-892 form to be provided for the instant application.

Claim Rejections Under 35 U.S.C. § 103

Claims 9-12 and 17

Claims 9, 10 and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,736,686 to Perret (hereinafter “Perret”) in view of U.S. Patent No. 6,369,866,234 to Rai et al. (hereinafter “Rai”).

Claims 11 and 12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Perret and Rai and further in view of U.S. Patent No. 4,521,772 to Lyon (hereinafter “Lyon”).

Applicants respectfully traverse the rejections.

Amended Claim 9 recites, *inter alia*:

An optical cursor control device having a light concentrating pad and an optical pointing device moved on the light concentrating pad by an operator, the light concentrating pad comprising:

an upper transparent plate attached to a top of the optical wave guide for passing the light reflected from the lower reflecting plate, *the upper transparent plate having an opening therein for exposing the optical waveguide, and a surface of an entrance of the opening being parallel to a surface of the lower reflecting plate in direct contact with the optical wave guide*;

a light concentrating plate attached to an edge of the lower reflecting plate and separated from the upper transparent plate,

wherein *the light concentrating plate is disposed on another portion of the sides of the optical wave guide, extending diagonally and upwardly from the lower reflecting plate to the upper transparent plate, contacting the upper transparent plate adjacent to the opening along a line, the opening of the upper transparent plate being disposed directly on the light concentrating plate*, and reflects external light into the optical wave guide.

In the instant Office action at Pages 6 and 7, Figure 1 and Col. 1, lines 14-19 of Perret are cited as teaching the claimed invention. Particularly, light guide 14, reflective structure 15, top surface 49/diffuser 56 and tape 47, in Figure 1 of Perret are respectively considered as teaching the “optical waveguide,” the “lower transparent plate,” the “upper transparent plate,” and the “light concentrating plate” of Claim 9.

The top surface 49 or the diffuser 56 of Perret does not include an opening therein for exposing the light guide 14, where an entrance surface of the opening is parallel to a surface of the reflective structure 15. Therefore, Perret *does not teach or suggest* the upper transparent plate having an opening therein for exposing the optical waveguide, and a surface of an entrance of the opening being parallel to a surface of the lower reflecting plate in direct contact with the optical wave guide of amended Claim 9.

In the instant Office action at Page 7, Figure 6 of Rai is cited as teaching elements of the claimed invention. Particularly, light guide plate 20, reflecting portion 40, display panel 10 and reflecting portion 44 in Figure 6 of Rai are respectively considered as teaching the “optical waveguide,” the “lower transparent plate,” the “upper transparent plate,” and the “light concentrating plate” of Claim 9.

The display panel 10 of Rai does not include an opening therein for exposing the light guide plate 20, where an entrance surface of the opening is parallel to a surface of the reflecting portion 40. Therefore, Rai also *does not teach or suggest* the upper transparent plate having an opening therein for exposing the optical waveguide, and a surface of an entrance of the opening being parallel to a surface of the lower reflecting plate in direct contact with the optical wave guide of amended Claim 9, and does not remedy the deficiencies of Perret.

As discussed above, neither the top surface 49 or the diffuser 56 of Perret nor the display panel 10 of Rai teaches the “opening” of the claimed invention. To the contrary, these elements of Perret and Rai teach totally solid members, with nothing resembling an opening. Since Perret and Rai are silent as to teaching anything of an “opening,” and instead teach *contrary to the claimed invention* as specifically teaching totally solid and continuous members, there exists *no suggestion or motivation to modify or combine* the top surface 49 or the diffuser 56 of Perret, and the display panel 10 of Rai to teach the upper transparent plate having an opening therein for exposing the optical waveguide, and a surface of an entrance of the opening being parallel to a surface of the lower reflecting plate in direct contact with the optical wave guide of amended Claim 9.

In the instant Office action at Page 7, Perret is conceded as not teaching that the tape 47, as teaching the “light concentrating plate” of Claim 9, is attached to an edge of the lower reflecting plate and separated from the top surface 49/diffuser 56. Instead, Rai is relied upon as teaching this limitation of the claimed invention.

Since Perret and Rai fail to teach or suggest the “opening in the upper transparent plate” of amended Claim 9, Perret and Rai necessarily *do not teach or suggest* a light concentrating plate disposed on another portion of the sides of the optical wave guide, extending diagonally and upwardly from the lower reflecting plate to the upper transparent plate, contacting the upper transparent plate adjacent to the opening along a line, the opening of the upper

transparent plate being disposed directly on the light concentrating plate of amended Claim 9.

Notwithstanding that Rai does not teach the “opening” in the display panel, the reflecting portion 44 in Figure 6 of Rai does not “extend diagonally and upwardly from” the reflecting portion 40, does not contact the display panel 10, let alone contact the display panel 10 adjacent to the opening, of amended Claim 9. Therefore, Rai further *does not teach or suggest* a light concentrating plate disposed on another portion of the sides of the optical wave guide, extending diagonally and upwardly from the lower reflecting plate to the upper transparent plate, contacting the upper transparent plate adjacent to the opening along a line, the opening of the upper transparent plate being disposed directly on the light concentrating plate of amended Claim 9, and does not remedy the deficiencies of Perret.

Lyon is relied upon as teaching the optical pointing device of Claims 11 and 12. Applicants respectfully submit that Lyon also *does not teach or suggest* the upper transparent plate having an opening therein for exposing the optical waveguide, and a surface of an entrance of the opening being parallel to a surface of the lower reflecting plate in direct contact with the optical wave guide, and a light concentrating plate disposed on another portion of the sides of the optical wave guide, extending diagonally and upwardly from the lower reflecting plate to the upper transparent plate, contacting the upper transparent plate adjacent to the opening along a line, the opening of the upper transparent plate being disposed directly on the light concentrating plate of amended Claim 9, and does not remedy the deficiencies of Perret and Rai.

Thus, Perret, Rai and Lyon, alone or in combination, *fail to teach or suggest all of the limitations* of amended Claim 9, and there exists *no suggestion or motivation to modify or combine the references* to teach the claimed invention. Accordingly, *prima facie* obviousness does not exist regarding amended Claim 9 with respect to Perret, Rai and Lyon. Applicants respectfully submit that Claim 9 is not further rejected or objected and is therefore allowable. As Claims 10-12 and 17 variously depend from Claim 9, they are correspondingly allowable. Entry of the claim amendments, reconsideration, withdrawal of the relevant §103 rejections, and allowance of Claims 9-12 and 17 are respectfully requested.

Claims 18-22

Claims 18, 21 and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,618,038 to Bohn (hereinafter “Bohn”) in view of U.S. Patent No. 6,741,234 to Son (hereinafter “Son”).

Claims 19 and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bohn in view of Son and further in view of U.S. Patent No. 6,111,563 to Hines (hereinafter “Hines”). Applicants respectfully traverse the rejections.

Amended Claim 18 recites, *inter alia*:

the optical pointing device comprising:
a case;

a light guide disposed at a sidewall of the case, *one portion of the light guide being a protrusion upwardly protruding from the sidewall of the case, the one portion of the light guide being exposed to an external environment outside the case, an other portion of the light guide extending from the sidewall of the case to an interior of the case by a predetermined length, the other portion of the light guide being exposed to an internal environment inside the case, the light guide directly accepting the external lights through the protrusion to obliquely irradiate lights penetrating the light guide onto a surface of the worktable through an opening formed in a lower panel of the case.*”

In the instant Office action at Pages 9 and 10, Figures 1 and 7 and Col. 4, lines 59-60 of Bohn are cited as teaching the claimed invention. Particularly, housing 504 and lens 108 in Figure 7 of Bohn are respectively considered as teaching the “case” and the “light guide” of Claim 18.

The lens 108 of Bohn does not protrude upwardly from the sidewall of the housing 504, but instead only protrudes laterally. Additionally, the lens 108 does not have “an other portion” extending from the same sidewall of the housing 504 to an interior of the housing 504 as illustrated in Figure 6 of Bohn. Therefore, Bohn *does not teach or suggest* a light guide disposed at a sidewall of the case, one portion of the light guide being a protrusion upwardly protruding from the sidewall of the case, the one portion of the light guide being exposed to an external environment outside the case, an other portion of the light guide extending from the sidewall of the case to an interior of the case by a predetermined length, the other portion of the light guide being exposed to an internal environment inside the case of amended Claim 18.

Son is relied upon as teaching the printed circuit board of Claims 18 and 22. Hines is relied upon as teaching the light concentrating surface and the illuminating surface of Claims 19

and 20. Applicants respectfully submit that Son (for example, Figures 3 and 7), and Hines (for example, Figures 2-6, 10, 11) also does not teach or suggest one portion of the light guide being a protrusion upwardly protruding from the sidewall of the case, the one portion of the light guide being exposed to an external environment outside the case, an other portion of the light guide extending from the sidewall of the case to an interior of the case by a predetermined length, the other portion of the light guide being exposed to an internal environment inside the case of amended Claim 18, and do not remedy the deficiencies of Bohn.

Thus, Bohn, Son and Hines, alone or in combination, *fail to teach or suggest all of the limitations* of amended Claim 18. Accordingly, *prima facie* obviousness does not exist regarding amended Claim 18 with respect to Bohn, Son and Hines. Applicants respectfully submit that Claim 18 is not further rejected or objected and is therefore allowable. As Claims 19-22 variously depend from Claim 18, they are correspondingly allowable. Entry of the claim amendments, reconsideration, withdrawal of the relevant §103 rejections, and allowance of Claims 19-22 are respectfully requested.

Claims 23 and 26-29

Claims 23 and 26-29 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,475,240 to Brogårdh et al. ^{***}(please see note above regarding PTO-892) (hereinafter “Brogårdh”) in view of U.S. Patent No. 6,377,249 to Mumford (hereinafter “Mumford”). Applicants respectfully traverse the rejections.

Amended Claim 23 recites, *inter alia*:

a light guide disposed at a sidewall of the case, and including first and second surfaces respectively on predetermined portions of the light guide,

the first surface of the light guide being spaced away from the case and accepting light reflecting from a surface of the worktable adjacent to the case, and

the second surface of the light guide being adjacent to the case and introducing the light penetrating the light guide onto an optical sensor in the case;

the first and second surfaces including one optically functioning material, and a remaining portion of the light guide including optically different functioning material from the first and second surfaces.”

In the instant Office action at Pages 12 and 13, Figures 4a and 9 of Brogårdh are cited as teaching the claimed invention. Particularly, marking device 33 in Figure 4a and fiber 36/121 in

Figure 9 of Brogårdh are respectively considered as teaching the “case” and the “light guide” of Claim 23.

Brogårdh teaches a marking device 33 having a marking point 34 (Figures 4a and 4b) surrounded by fibers 36-38, and light is reflected back from material 3 into fibers 35-38, passed to branches 124-127 and forwarded to fibers 120-123. (See, Col. 7, lines 1-16 and Figure 9.) A bottom of fiber 36 and a top of fiber 121 are respectively considered as the “first surface” and the “second surface” of Claim 23. That is, fiber 36, fiber 121, bottom of fiber 36 and top of fiber 121 of Brogårdh are all the same materials, e.g., “fibers.” Therefore, Brogårdh *does not teach or suggest the first and second surfaces including one optically functioning material, and a remaining portion of the light guide including optically different functioning material from the first and second surfaces* of amended Claim 23.

Mumford is relied upon as teaching the protrusion of the light guide. Applicants respectfully submit that the “protrusion” of the light guide has been deleted from Claim 23, and that Mumford also *does not teach or suggest the first and second surfaces including one optically functioning material, and a remaining portion of the light guide including optically different functioning material from the first and second surfaces* of amended Claim 23, and does not remedy the deficiencies of Brogårdh.

Thus, Brogårdh and Mumford, alone or in combination, *fail to teach or suggest all of the limitations* of amended Claim 23. Accordingly, *prima facie* obviousness does not exist regarding amended Claim 23 with respect to Brogårdh and Mumford. Applicants respectfully submit that Claim 23 is not further rejected or objected and is therefore allowable. As Claims 26-29 variously depend from Claim 23, they are correspondingly allowable. Entry of the claim amendments, reconsideration, withdrawal of the relevant §103 rejections, and allowance of Claims 23 and 26-29 are respectfully requested.

Conclusion

In view of the foregoing, it is respectfully submitted that the instant application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference

with Applicants' attorneys would be advantageous to the disposition of this case, the Examiner is cordially requested to telephone the undersigned.

Applicants hereby petition for any necessary extension of time required under 37 C.F.R. 1.136(a) or 1.136(b) which may be required for entry and consideration of the present Reply.

In the event the Commissioner of Patents and Trademarks deems additional fees to be due in connection with this application, Applicants' attorney hereby authorizes that such fee be charged to Deposit Account No. 06-1130.

Respectfully submitted,

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